ABSTRACT

The present invention provides methods for rapidly determining the function of nucleic acid sequences by transfecting the same into a host organism to effect expression. Phenotypic and biochemical changes produced thereby are then analyzed to ascertain the function of the nucleic acids which have been transfected into the host organism. The invention also provides methods for silencing endogenous genes by transfecting hosts with nucleic acid sequences to effect expression of the same. The present invention also provides methods for selecting desired functions of RNAs and proteins by the use of virus vectors to express libraries of nucleic acid sequence variants. Moreover, the present invention provides methods for inhibiting an endogenous protease of a plant host.